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(71) Applicant: REDCART TECHNOLOGIES, INC. [US/US]; Suite 211, 1000 Brannan Street, San Francisco, CA 94103 (US).

(72) Inventors: VAN DEN BERGHE, Nicholas; 2677 Larkin Street, #701, San Francisco, CA 94109 (US). GERONIMI, Raphael; 563 Castro Street, San Francisco, CA 94114 (US).

(74) Agents: GLENN, Michael, A et al.; Glenn Patent Group, 125 Lake Road, Portola Valley, CA 94028 (US).

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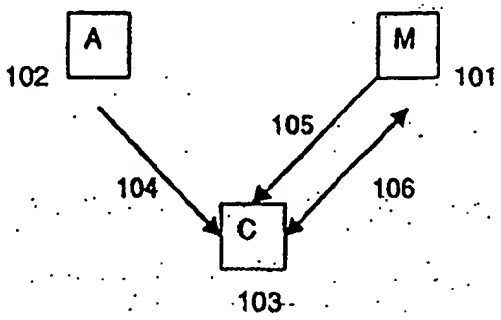
(54) Title: UNIVERSAL SHOPPING CART SYSTEM

(57) Abstract

A multi-site shopping cart and cooperative sales system provides two or more Web sites with the ability to enter into Cooperative Sales relationships that provide added value to end users through a Multi-Site Shopping Cart. The invention enables online shoppers to select and purchase items across a network of unrelated Merchant Web sites starting from a Lead Web Site, without having to repeatedly enter their relevant information and provides a Parsing Proxy Server (PPS) and an Application Server (APS) located on distributed computers across a network. The PPS acts as an intermediary between the consumer and the Merchants by parsing pages served by the Merchant to the consumer, and redirecting Universal Resource Locators (URL) in the Merchant's pages back to the PPS. The PPS can thus track, manage, and monitor the consumer's shopping interaction with the Merchants. The PPS extracts relevant information by parsing the pages through a wrapper code that allows it to customize its interaction with each particular Merchant. Alternatively, the PPS can gather the relevant information by searching for predefined tags inserted into the pages by the Merchants. The PPS sends the relevant information to the APS. The Multi-Site Shopping Cart experience is created by the APS on the Lead Web Site. The APS gathers the consumer's shopping cart information from the PPS, re-creates this information onto the shopping cart located on the Lead Web Site, and displays it to the consumer. When a consumer decides to finalize her purchases, the APS executes the purchases on the various Coop Merchant sites through form filling or through a software robot ("bot") on the PPS. The consumer can create a wish list of items, purchase and redeem a universal gift certificate, create a pooling of resources to purchase a gift, and create and post a suggestion list from a partner site all using the Multi-Site Shopping Cart system on a Lead Web Site.



A – Affiliate Site
M – Merchant Site
C – Customer

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Universal Shopping Cart System

BACKGROUND OF THE INVENTION

TECHNICAL FIELD

The invention relates to electronic commerce in a computer environment. More particularly, the invention relates to providing a single shopping cart solution between a number of merchants that allows each merchant to present its Web site to the customer in a computer environment.

DESCRIPTION OF THE PRIOR ART

One of the more common business relationship models on the Internet involves two or more Web sites participating in an e-commerce transaction. These relationships can generally be organized in two opposing categories: "Referrals" and "Superstores".

Until recently, the only form of cooperation among Web sites was Referrals. One site would include in its pages a link to another site. Sites would reward each other based on the number and nature of referrals that occurred.

One example of the use of Referrals is Yahoo, one of the various search engines on the Web. A Customer searches for "Patagonia clothing" and Yahoo serves a page containing a link to Patagonia's Web site. Patagonia will pay Yahoo a fixed rate for each surfer referred from Yahoo to Patagonia. If the Customer purchased something from the Patagonia site, then Patagonia pays Yahoo a commission based on the size of the sale.

In this model, the power and control are heavily biased towards the merchant. The merchant decides the type of commission it is willing to pay the referrer or "affiliate". The merchant also controls the end user's shopping experience.

The end user typically moves from one Web site to the another, creating a discontinuous experience. Any information that she may have left on a portal site is not passed on to the merchant and any information she has left on the merchant site, *e.g.*, a selection of products in her shopping cart, exists only on the merchant's site.

Recently, some portals like Excite and Yahoo have pulled the model in the opposite direction - from the affiliates. The portal sites have become full-featured shopping destinations. These shopping sites correspond to the "Superstore" model, where all products are available in one location, under one retailer brand. Once the order is taken, the portal sites use online merchants for order fulfillment.

The control and power has completely shifted from the merchant to the portal.

This shift brings some benefits to the end user: she can use the same shopping cart on the Superstore site to buy items from different merchants. She can also have her information stored on the Superstore site to avoid the inconvenience of refilling forms every time she wants to make a purchase from a new merchant.

However, this approach has some drawbacks. The Superstore is responsible for displaying the merchant's products and information, *i.e.*, the Superstore must recreate each merchant's Web site or alternatively offer a poor online shopping experience to the end user.

It would be advantageous to provide a universal shopping cart system that balances the power between the portals and merchants and allows the merchants to present their Web sites to the end user without recreating the Web sites on the portal site. It would further be advantageous to provide a universal shopping cart system that presents a single shopping cart interface to the end user.

SUMMARY OF THE INVENTION

The invention provides a Multi-Site Shopping Cart system which enables portals and merchants to form a Cooperative Sales relationship across a computer network. The invention provides a system that presents the customer with a single shopping cart interface which enables her to purchase items from several distinct merchants at a single location, with just a single click of the mouse.

Additionally, the system allows merchants to retain control of the customer's shopping experience by granting consumers access the merchants' actual Web sites.

A preferred embodiment of the invention provides two components: an Application Server (APS) that controls the content of the Multi-Site cart and stores the user information; and a Parsing Proxy Server (PPS) that acts as an intermediary between the user and the merchants when the user is browsing the merchant Web sites.

At the beginning of the user's shopping session, the APS serves pages with links to the merchant Web sites. These links are routed through the PPS in the following manner: the user's browser requests a page from the PPS, which in turns requests a page from the merchant site, processes this page, and then serves it to the browser. The minimum level of processing done by the PPS consists of finding the links in the HTML page of the merchant and ensuring that all these links are modified to route through the PPS. This means that, as the user clicks on links in the page, all of the browser requests are sent to the PPS.

If the merchant pages contain some information on the items selected by the user, the PPS extracts this information and sends it to the APS, using the HTTP protocol. If the page to be served is the merchant's shopping cart page, the PPS performs a re-direct to the APS, and the APS displays the Multi-Site Shopping Cart page which includes the item just selected on the merchant site.

When the user is ready to execute the purchase, she can select a sub-set of her shopping cart. She can then click on a "buy" button. The APS instructs the PPS to re-create, on the merchant sites, the shopping carts corresponding to the selected items, and then to place an order using the user's billing and shipping information. This interaction is performed by a bot, which is a component of the PPS, either by simulating the user's clicks on the merchant site or by using the merchant's own API, if available. Alternatively, the user can go to the merchant's web site through the PPS, and perform a manual checkout process as implemented by the merchant. In that case, the PPS will help the user by filling the forms with the user's information.

The Multi-Site Shopping Cart system can also be applied to a number of innovative features that would add value and functionality to the user's overall shopping experience. These features include the Multi-Site Shopping Cart

system being deployed to compile a Wish List, redeem a Universal Online Gift Certificate, organize and enable a Group Gift purchase, and to compile and purchase items from a Suggestion List enacted by a partnering Web site.

Other aspects and advantages of the invention will become apparent from the following detailed description in combination with the accompanying drawings, illustrating, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block schematic diagram of a prior art Referral Internet business relationship model according to the invention;

Fig. 2 is a block schematic diagram of a prior art Superstore Internet business relationship model according to the invention;

Fig. 3 is a block schematic diagram of the balance of power that the invention's Cooperative Sales business model offers according to the invention;

Fig. 4 is a block schematic diagram of a preferred embodiment of the invention showing the components of the Cooperative Sale Architecture according to the invention;

Fig. 5 is a block schematic diagram of a the relationship between the Lead Web Site, Coop Merchant, Customer, and the invention's server according to the invention;

Fig. 6 is a block schematic diagram of the participant interactions for the Wish List and Group Purchase features of the invention according to the invention;

Fig. 7 is a block schematic diagram of the participant interactions for the Suggestion List feature of the invention according to the invention; and

Fig. 8 is a block schematic diagram of the Universal Gift Certificate feature of the invention according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

The invention is embodied in a universal shopping cart system in a computer environment. A system according to the invention provides portals and merchants with a cooperative sales relationship across a computer network that allows merchants to retain control of the customer's shopping experience. In addition, the invention provides a system that presents the customer with a single shopping cart interface that includes all of the participating merchants.

The invention provides online services that enable portals (heavily trafficked Web destinations) and merchants to cooperate seamlessly in e-commerce transactions and provide substantial added value to the end user.

The following discussion and figures do not treat the Portal and Merchant Web sites as monolithic entities. They are instead treated as being composed of the following components:

P-ref:

Portal Referrals. Traditionally, Portals display links to other sites. Presumably, some portion of the Portal will continue to do this even though another portion of the Portal is a SuperStore.

P-stf:

Portal Storefront. This is the new Portal behavior where the Portal provides a Super Store. Customers indicate the sort of item that they are trying to purchase and the Portal produces a listing of Merchants that have the item, along with prices and other information. The customers purchase goods from the Portal and the Portal forwards relevant information to the appropriate Merchant. Customers never see a page served by the Merchant Web server.

M-stf:

Merchant's Storefront. The Merchant's Web site. This is what Customers would see if they directly accessed the Merchant's Web site. In the invention's new model, Customers may never see this site.

M-cat:

Merchant's Catalog. The list of products the Merchant sells. Also includes price and availability. The Catalog is blended seamlessly into the Merchant's Storefront in a traditional model. In the invention's new model, the Catalog is also accessed as a stand-alone data source. The Portal Super Store uses this data source to acquire the relevant product information.

M-ofl:

Merchant's Order Fulfillment. The mechanism for placing an order. This traditionally includes some sort of shopping cart, credit card processing, and addressing. Also in a traditional model, Order Fulfillment is blended seamlessly into the Merchant's storefront. In the invention's new model, Order Fulfillment is also used as a stand-alone service that other Agents (such as Yahoo) can use to place an order.

Two different prior art Internet business relationship models are examined below: Referral and Superstore.

The Referral Program Model

Until recently, the only form of cooperation among Web sites was Referrals. One site would include in its pages a link to another site. Sites would reward each other based on the number and nature of referrals that occurred.

Discussed here is an example of the Referral model involving Yahoo, one of the various search engine portals on the Web. A Customer enters the Yahoo portal and enacts a search for "Patagonia clothing." Yahoo processes the request and serves a page containing a link to Patagonia's Web site. Patagonia will pay Yahoo a fixed rate for each surfer referred from Yahoo to Patagonia. If the Customer purchased something from the Patagonia site, then Patagonia pays Yahoo a commission based on the size of the sale.

In this model, the power and control are heavily biased towards the merchant. The merchant decides the type of commission it is willing to pay the referrer or "affiliate". The merchant also controls the end user's shopping experience.

The end user typically moves from one Web site to the another, creating a discontinuous experience. Any information that she may have left on a portal site is not passed on to the merchant and any information she has left on the merchant site, *e.g.*, a selection of products in her shopping cart, exists only on the merchant's site. Also, if she purchases something on the merchant site, her billing and shipping information will only be stored on that same site.

Fig. 1 shows a typical form of referral relationship that currently exists. A Merchant 101 signs up other Web sites as Affiliates 102. Each Affiliate 102 includes on its Web site links to the Merchant site 101. The Merchant 101 rewards the Affiliate 102 based on the number of referrals and the type of actions that referred Customers 103 perform while surfing on the Merchant site 101.

The interaction between the Customer 103, Affiliate site 102, and Merchant site 101 proceed as follows:

1. The Customer 103 downloads a page 104 from the Affiliate site 102. The page includes hyperlink(s) to the Merchant site 101.

2. Customer 103 selects link 105 to Merchant site 101. Appropriate page is downloaded 105 from Merchant site 101. Page includes links to other pages within Merchant site 101.

3. Customer 103 downloads one or more additional pages 106 from Merchant site 101. Customer 103 may also purchase something from Merchant site 101. A commission of sales or a fixed amount is then due from the Merchant to the Affiliate for every referral or sale initiated from the Affiliate site 102.

Analysis of the Referral Relationship

End User Pluses:

The customer has access to the merchant's storefront. She also feels confident that she is buying from a trusted brand and web site.

End User Minuses:

The end user typically moves from one Web site to the another, creating a discontinuous experience. Any information that she may have left on a portal site is not passed on to the merchant, and any information she has left on the merchant site, *e.g.*, a selection of products in her shopping cart, exists only on the merchant's site. This creates a duplication of tasks performed by the user, such as entering shipping addresses, credit card information, and refilling the cart with items she had previously selected for purchase.

In simple referral relationships, the two sites remain completely independent from each other. In the above example, once the Customer begins receiving pages from the Merchant server, the Affiliate plays no further role in the Customer's purchase or shopping experience. This loss of control makes the Affiliate unable to track the various referrals, and so the Merchant needs to do it.

The Superstore Model

Recently, some portals like Excite and Yahoo have pulled the model in the opposite direction, shifting the focus of the user's shopping experience from the merchant site to the portals themselves, or the entities which acted merely as affiliates in the previous model. These portal sites have become full-featured shopping destinations, thereby creating a shopping environment that corresponds to the "Superstore" model. In the Superstore model, all products are available in one location. The portal, previously the "referrer," does not actually refer the customer to the merchant site. Instead, the "referrer" is a Super Store; it provides a storefront where many merchants' goods are available. The customer can access a merchant's goods, but the customer never directly interacts with the merchant's Web site. Instead, the customer can place her order on the portal site. Once the order is taken, the portal site then uses the online merchants for order fulfillment.

In the Superstore model, the balance of control and power has shifted completely from the Merchant to the Portal.

This shift brings some benefits to the end user: she can use the same shopping cart on the Superstore site to buy items from different merchants. She can also have her information stored on the Superstore site to avoid the inconvenience of refilling forms every time she wants to make a purchase from a new merchant.

However, this approach has some drawbacks. The Superstore is responsible for displaying the merchant's products and information, i.e., the Superstore must recreate each merchant's Web site, which is done incorrectly, may offer the end user a poor online shopping experience.

There are several variations on the Superstore theme. Referring to Fig. 2, an exemplary model of Yahoo's Superstore approach is shown. The following steps occur during a typical transaction:

1. (This step does not have to occur.) Customer 201 performs some sort of query on Portal (Yahoo) 202 to identify item to be purchased 206. This may be an iterative process. In the end, user 201 has determined what she wants to buy. For our example, assume it is the book "Gone With the Wind".

2. Customer 201 requests to visit the Yahoo Storefront 207. Yahoo 202 serves the appropriate page 207. Customer 201 indicates the item that she wants to purchase.

3. Yahoo 202 queries relevant merchant's catalogs to determine price and availability 211, 212, 213. The access to the merchant catalogs is generally based on a copy stored on Yahoo's site 202 and periodically updated, although heavier systems such as the Commerce One Market Site have some real time capabilities.

4. Yahoo 202 serves a page to the Customer 201 containing appropriate information 208. The page contains information about specific Merchants 203, 204, 205 and their offerings, but all of the links that Customer 201 sees are links to Yahoo 202, not links to Merchants 203, 204, 205.

5. Customer 201 selects link to indicate which Merchant 205 she wants to purchase book from 209. Yahoo 202 serves appropriate pages to perform capture Order information 209. Customer 201 confirms decision to buy 209.

6. Yahoo 202 serves order completion page 210.

7. Yahoo 202 transmits minimal Order Fulfillment information 214 to Merchant 205.

Analysis of the Superstore Model

End User Pluses:

The customer gets the convenience of one stop shopping. In addition, Superstores typically offer a comprehensive list of possible merchants for a given product thus enabling the customer to do a thorough price comparison. The customer can use a single shopping cart to purchase items from different merchants and, at the same time, she stores her information at the Superstore so she won't have to fill out forms for each merchant.

End User Minuses:

The customer loses the benefits of browsing the merchant's storefronts where valuable information is often displayed. For example, Amazon displays book suggestions in its book section that may aid a customer in selecting a more satisfactory purchase. This added value is lost in the Superstore model. The customer may have also developed a relationship with a merchant based on certain services that the merchant provides, but that are not passed on by the portal site. For example, the customer may enjoy buying toys from eToys because she likes the quality of its post-sales service, and because she knows that eToys is reliable in its shipping dates. This relationship is lost in the Superstore model.

The Superstore model is attractive to portals as they have control over the data and the user's shopping experience. The portal's brand is both used and strengthened through this relationship.

On the other hand, the Superstore model is unattractive to merchants. Although merchants eventually get the user's data (to fulfill the order), they cannot affect the user's experience and thus lose an opportunity to use and build their brand. Basically, merchants are reduced to commodity wholesalers that compete mostly on price, availability, and delivery terms. Hence, merchants are sometimes reluctant to enter into relationships based on the Superstore Model.

The lack of a standard in information formats is an additional impediment to the deployment of this model. Merchants and portals need to agree on a format to pass product information in one direction and order information in the other direction. Since many of these e-commerce systems are ad hoc, there are not

likely to be many standards. Yahoo can define a data interchange standard and impose it on merchants. Other portals and merchants do not have that kind of leverage.

A New Model: Cooperative Sales

A preferred embodiment of the invention provides a new model of electronic commerce relationships: Cooperative Sales. Under this model, portals and merchants, or merchants among themselves, seamlessly cooperate to enhance the end user experience and close e-commerce transactions. This new model is implemented using a Cooperative Sale Architecture (COSA).

In a Cooperative Sales model, the customer starts her shopping experience on a portal site, then goes to one or several merchants sites, chooses items to buy on these sites, and makes the final payment for all of the items on the portal site. Two merchants could also cooperate and cross sell their products, with the actual purchase transacted on a single site. In addition, some cross-selling promotions can be inserted and propagated from one site to the other and be included in the final purchase.

Referring to Fig. 3, in the Cooperative Sales model 301, the portal or one of the merchants takes the leadership, becoming the "Lead Web Site" 302. The other merchants cooperate and become "Coop Merchants" 303.

The Cooperative Sales model 301 realigns the balance of power among the actors towards the middle, where the Merchants and Portal sites share the power. As previously noted, the Referrals model 305 shifts the power to the Merchant, while the Superstore model 304 shifts the power in the opposite direction to the Portals.

With respect to Fig. 4, the invention is comprised of two sets of components:

1. The Application Servers 405 which are all connected to the main database 404.
2. The Parsing Proxy Servers 401, each of them connected to its own Data Propagation Server 402, which is a fast in-memory database.

The two sets of components exchange data across the network.

Application Server

The Application Server (APS) 405 handles the user interface on the Lead Web Site 403, while managing and storing the user's data at the same time. When the user 407 decides to shop on a coop merchant web site 406, the APS 405 takes care of feeding the Parsing Proxy Server 401 the user's relevant information. In return, the APS 405 receives from the Parsing Proxy Server 401 both merchant information, *e.g.*, shopping cart and product information, as well as previously stored user information, which may be forms pre-filled with the user's contact information (shipping addresses, etc).

Parsing Proxy Server

The Parsing Proxy Server (PPS) 401, handles all the user HTTP/HTTPS connections to the merchants. It performs five functions :

1. Serving as an intermediary for user requests to merchant sites (by diverting links and managing cookies in the DPS 402).
2. Recording the user behavior in log files to allow multi-merchant statistics.
3. Parsing scripts or HTML pages and taking indicated actions at the appropriate times (*e.g.*, redirecting the user 407 to the Lead Web Site 403 when needed).
4. Pulling information from the merchant pages (*e.g.*, the products description and shopping cart contents), and pushing information into the pages sent back to the user (*e.g.*, form filling with email address, etc.).
5. Automatically interacting with the merchant web site 406 to perform automatic tasks, *e.g.*, automatic login/signup or one-click-checkout. This interaction is done either by simulating user's clicks, or by using the merchant's own API if available.

The PPS 401 requests information from the APS 405 in order to perform its duties, and then sends back relevant customer data to the APS 405 when necessary.

To accommodate differences in behavior and layout among merchant web sites, each coop merchant web site is assigned a piece of code called a "wrapper". This wrapper is responsible for the data pull & data push function (4), for the

automatic interactions with the merchant (5), and for some details in 1, 2, and 3, above.

An alternative to wrappers is the insertion of HTML comment tags inside particular pages of the merchant site 406. These tags help the PPS 401 identify the information it needs in the merchant page to recreate the user's shopping cart at the Lead Web Site 403. The tags also help the PPS 401 identify the locations in the merchant page where the customer information should be placed.

Data Propagation Server

The PPS 401 manages all its data into a repository called the Data Propagation Server (DPS) 402. The DPS 402 handles all the data, be it merchant-specific or user-specific data.

The user-specific data is organized into meta-sessions: a meta-session is a user-session on the PPS 401 which itself is subdivided into several merchant sessions, one for each merchant visited by the user 407. Each merchant session contains the merchant shopping cart, and the cookies and session information needed to continue requesting data from this merchant and posting data to this merchant.

Referring to Fig. 5, an example of the COSA model is shown. The following steps occur during a typical transaction.

1. The user 502 goes to the Lead Web Site 503 and, if necessary, logs in. The Application Server 505 serves the HTML pages that she receives.

2. The user 502 selects a coop merchant store 501 and clicks on its link the link generated by the Application Server 505 goes through the PPS 506. Immediately, the PPS 506 requests information about this customer to the Application Server 505, and stores it in its DPS 506. Then, the PPS 506 sends this request to the target coop merchant server 501, retrieves the response and parses it (in cooperation with the DPS 506). The result of the parsing is sent back to the user's browser. All links are diverted to ensure that they go through the PPS 506. All cookies are stored directly on the DPS 506, and not sent back to the user's browser.

3. The user 502 surfs on the merchant web site and decides to add a product to her cart: the PPS 506 detects this action, parses the product data or the shopping cart page (depending on the merchant web site structure), and sends the data back to the Application Server 505. The data sent back contains all the information needed to later rebuild the coop merchant cart from scratch if necessary. The PPS 506 then redirects the user 502 to the multi-site shopping cart page of the Application Server 505.

4. The Application Server 505 serves this page back to the user 502. The user 502 can choose to continue shopping (step 2). Alternatively, she may:
   - 4.1. Change the quantities of her universal cart. The Application Server 505 will instruct the PPS 506 to change the corresponding item quantities on the coop merchant web servers 501.
   - 4.2. Email her universal cart to a friend. When her friend accepts the emailed items, the Application Server 505 will ensure that the PPS 506 rebuilds the corresponding shopping carts on the coop merchant sites 501.
   - 4.3. Buy the items in her cart, or a subset of these items, with one-click-checkout. The Application Server 505 will launch the one-click-checkout on the PPS 506, which will in turn automatically contact the coop merchant web servers 501 and checkout the shopping carts with the user information.
   - 4.4. Buy the items in her cart through a "manual checkout." The Application Server 505 will redirect the user to the coop merchants web sites through the PPS 506. The PPS 506 receives the order forms and fills them with the user data before serving them to the user 502; the form pages appear pre-filled to the user 502.

If the user 502 modifies the pre-filled information in a form or adds new information (for example, a new shipping address or a new credit card number), the PPS 506 sends the new information back to the Application Server 505 to store it. The user 502 will later be able to reuse it through the automatic form filling feature.

Analysis of the Cooperative Sales Model

End User Pluses:

- The customer has access to all her favorites vendors; she can go to the actual sites and navigate their storefronts.

- She can be confident that she is buying from merchants that she trusts.

- She can keep track of all the items that she is interested in by storing them in the Multi-Site Shopping Cart.

- She can check out all of the items she wants from one place, in one click. She doesn't have to enter her information at each Coop Merchant site that she's buying from: the PPS software bot does it for her.

In addition to these benefits, the drawbacks of both the Referral and the Superstore models have been eliminated.

The invention provides a solution to the imbalance of power between merchants and portals present in both the Referral and Superstore models. The invention's approach enables a new relationship between portals and merchants which can be represented as a "Cooperative Sales" model.

In the Cooperative Sales model, merchants will no longer be treated as commodity wholesalers to stronger portals, while portals will not completely lose access to the users they pass on to a merchant's site. As portals are often heavily trafficked for other reasons in addition to online shopping, it is the merchants who often suffer greater consequences from their commoditization. For these Merchants, the Cooperative Sales scenario is a much better situation than the relationship they would have under the Superstore model with a powerful portal such as Yahoo.

Additional Features Enabled by the Cooperative Sales Architecture

Wish List

With respect to Fig. 6, the Customer 602 can use the Multi-Site Shopping Cart offered by the APS 609 on the Lead Web Site 603 to browse her favorite merchant sites (the "Coop Merchants") 604, 605, 606, and select items that she likes. The Multi-Site Shopping Cart takes the product information from each merchant by going through the PPS 601. These items will then be stored on the Lead Web Site 603 through the APS 609. The user has the option of editing her Wish List by deleting items or changing their quantities on the Lead Web Site 603, without having to go back to the Coop Merchant sites 604, 605, 606.

When satisfied with her selection, the user places her list in a template and posts it on the Web. She then emails the location (url) of her Wish List to her friends 607, 608. Her friends 607, 608 can open the emailed link to the url on the Lead Web Site 603 to view their friend's Wish List. Alternatively, they can search for the location through the search Wish List function on the Lead Web Site 603.

The friends 607, 608 can select the items that they want to buy for the user and transact the purchase on the Lead Web Site through the APS 609 and the PPS 601. The PPS 601 will place the order for them in the one-click checkout mode, or track the purchase if they decide to go through the manual checkout mode. PPS 601 then passes on the purchase information to the Lead Web Site 603. As the Lead Web Site 603 processes this information, the purchased items will either be taken off or marked as purchased on the Wish List displayed on the Lead Web Site 603.

Suggestion List on Other Web Sites

Referring to Fig. 7, the Suggestion List is a tool provided by the APS 708 and PPS 701 to enable the Lead Web Site 704 to partner with other Web sites. The Partner Web Sites 702 provide a list of products from the Coop Merchants 705, 706, 707 that they suggest or recommend to their users. The links to these products go through the PPS 701, so that the previously described processes of relaying product and order information through the PPS 701 can take place. The products can then be purchased on the Lead Web Site 704 in just one click.

Web surfers 703 coming to the partnering site 702 will see the Suggestion List. They will be able to select products from the list in which they are interested and click on a "Buy" button to begin the purchase process. This act will take them to the Lead Web Site 704 where they can log in if they already have an account or sign up if they are new to the site. The Lead Web Site 704 stores the Customer's 703 credit card, billing and shipping information. Using a PPS checkout bot 701, the Customer 703 then purchases her selection from the Lead Web Site in one click.

In this case, the partnering Web site 702, or "author" of the suggestion list, acts as an authority by suggesting products to its end users. The author of the Suggestion List merely needs to insert a code onto her site 702. Two methods to create the Suggestion List are used: "manual" and "assisted".

Using the manual method, the author finds the url of the product on the merchant site. Instead of using this url to link to the product to the merchant site, the author adds a prefix to this url so that the link goes through the PPS 701.

In the assisted method, the author uses the Multi-Site Shopping Cart offered by the Lead Web Site 704. The author browses the Coop Merchant sites 705, 706, 707 and selects items she would like to include in her Suggestion List. She can edit her list by deleting items or changing their quantities on the Lead Web Site 704, without having to go back to the Coop Merchant sites 705, 706, 707.

When satisfied with her selections, the author then places her list in a template and posts it on her partnering web site 702.

Universal Gift Certificate

With respect to Fig. 8, the Customer 803 can purchase and send an online Gift Certificate to someone else. This Universal Gift Certificate is redeemable on any of the Coop Merchant sites 805, 806 or any subset of these merchants, as decided by the purchaser 803 of the gift certificate.

To purchase the Universal Gift Certificate, the Customer 803 chooses the amount of the gift certificate and enters her credit card and billing information on the Lead Web Site 804. The Lead Web Site 804 then debits the buyer's credit card by the amount she selected for her Gift Certificate.

The purchaser 803 sends the Gift Certificate to a friend 802 through an email generated by the APS (which is part of the COSA system) 804. The recipient 802 then uses the Multi-Site Shopping Cart system to browse across Coop Merchant sites 805, 806 authorized by the Customer 803, and select which items she would like to buy using the Gift Certificate.

At checkout, the recipient 802 can use the amount of the Gift Certificate to pay for the items she selected. To accomplish this, the PPS checkout bot 801 uses the Lead Web Site's 804 credit card (or other means of payment accepted by the Coop Merchant) instead of using the Customer's 803 credit card. If the amount of the purchase is higher than the gift certificate, the Lead Web Site 804 will ask the gift recipient 802 for the difference. If it is lower, the corresponding credit will be available for another purchase.

Group Gift Purchase

Referring again to Fig. 6, several people can decide to pool their resources to purchase an item for a common friend, thus the term "Group Gift". One of friends, acting as the "organizer" 602, browses the Coop Merchant sites 604, 605, 606 and chooses a gift. Using the Multi-Site Shopping Cart enabled by the PPS 601 and APS 609 interaction, the organizer 602 can choose a "gift" that may be made up of several items, which in turn may come from several different merchants.

The organizer 602 can assign purchase contribution levels to her friends 607, 608 on the Lead Web Site 603. For example, four friends can split the total cost of the gift evenly, each paying for a quarter of the cost. The APS 609 sends an email to the friends 607, 608 prompting them to come to the Lead Web Site 603 and pay for their contribution by entering their credit card information. Once the full amount has been collected, the Lead Web Site 603 sends an email to the organizer 602, who then completes the purchase with the funds that have been made available.

In the case of a shared purchase such as an "office pool" environment, the organizer 602 can select another option for her friends 607, 608 where each friend personally determines the amount of their contribution, *i.e.*, the contribution amount is "open". An email is sent to the friends 607, 608 in the same manner as above. The friends 607, 608 then go to the Lead Web Site 603 and pay for their contribution. At this point, anyone can check to see the total amount paid. The organizer 602 could alternatively choose to make the contributions "blind", *i.e.*, nobody can see the amount of each person's contribution, or decide that she is the only person allowed to see the contribution amounts. Once a certain time period has elapsed or a set monetary amount has been reached, the Lead Web Site 603 emails the organizer 602. The organizer 602 then either completes the purchase of the selected gift, or uses the available funds to purchase another gift should the collected contributions exceed, or fall short of, the cost of the originally selected gift.

Although the invention is described herein with reference to the preferred embodiment, one skilled in the art will readily appreciate that other applications may be substituted for those set forth herein without departing from the spirit and scope of the present invention. Accordingly, the invention should only be limited by the Claims included below.

CLAIMS

1. A process for a Multi-Site Shopping Cart that provides portals and merchants with a Cooperative Sales relationship across a computer network and allows merchants to control the customer's shopping experience in a computer environment, comprising the step of:

providing a parsing proxy server;

wherein a portal or a merchant may be designated as a Lead Web Site;

wherein said customer begins shopping through said Lead Web Site;

wherein said proxy server receives merchant page requests from said customer, through links placed on said Lead Web Site;

wherein said proxy server forwards said requests to the appropriate merchant;

wherein said proxy server receives the requested page; and

wherein said proxy server redirects the proper Universal Resource Locators (URL) in said requested page to said proxy server before serving said requested page to said customer.

2. The process of Claim 1, wherein said proxy server uses a wrapper specific to said merchant, said wrapper recognizes the URL of the pages served by the merchant and searches for the relevant information in said requested page.

3. The process of Claim 2, wherein said wrapper on said proxy server receives customer information from an application server and places it in said requested page.

4. The process of Claim 1, wherein said proxy server uses tags that the merchant has inserted into the page's HTML template to recognize the URL of the pages served by the merchant and searches for the relevant information in said requested page.

5. The process of Claim 4, wherein said tags also indicate scripts to be executed by said proxy server.

6. The process of Claim 1, further comprising the step of:

providing an application server resident on said Lead Web Site;

wherein said proxy server sends the relevant information from said

requested page to said application server; and

said application server gathers said relevant information to create and display said Multi-Site Shopping Cart.

7. The process of Claim 6, wherein said proxy server receives customer information from said application server and places said customer information in said requested page at locations in said requested page indicated by tags inserted by the merchant into said requested page's HTML template.

8. The process of Claim 6, wherein said application server allows said customer to click on a single button to purchase the items in said Multi-Site Shopping Cart, said application server instructs a software robot on said proxy server to re-create each shopping cart on each merchant listed in said multi-site shopping cart and then simulate the check-out procedure on said merchant site on said customer's behalf, using said customer's information.

9. The process of Claim 1, wherein said proxy server manages cookies sent by merchant sites.

10. The process of Claim 1, wherein said proxy server records said customer's shopping behavior in a database.

11. The process of Claim 1, further comprising the step of:

allowing said customer to create a wish list on said Lead Web Site;

wherein said customer browses said customer's favorite merchant sites, selects items that said customer is interested in, and creates said wish list by placing said items in said Multi-Site Shopping Cart on said Lead Web Site's site; and

wherein said customer can edit said wish list by deleting items or changing their quantities on said Lead Web Site without having to go back to the other merchant sites.

12. The process of Claim 11, wherein said customer's friends view said wish list on said Lead Web Site; and wherein said friends select items that they want to purchase for said customer through said Multi-Site Shopping Cart.

13. The process of Claim 12, wherein said purchase is tracked and the purchased item is automatically taken off said wish list.

14. The process of Claim 1, further comprising the step of:

allowing an author to create a suggestion list for a partnering site;

wherein said author places said suggestion list in a template and posts it on a partnering web site;

wherein a customer visiting said partnering site views said suggestion list and selects the products that said customer is interested in from said suggestion list by clicking on a link, thereby taking said customer to merchant site through said proxy server; and

wherein items selected on merchant site are added to said multi-site shopping cart on said Lead Web Site.

15. The process of Claim 14, wherein said application server on said Lead Web Site stores said customer's credit card and billing and shipping information and allows said customer to purchase the selections in said multi-site shopping cart in one button click.

16. The process of Claim 14, wherein said author of said suggestion list browses merchant sites and select items that said author is interested in to create a suggestion list using said Multi-Site Shopping Cart on said Lead Web Site's site; wherein said author can edit said suggestion list by deleting items or changing their quantities on said Lead Web Site without having to go back to the other merchant sites; and wherein said author can post said suggestion list on said Lead Web Site.

17. The process of Claim 1, further comprising the step of:

allowing a customer to purchase an online universal gift certificate on said Lead Web Site's site;

wherein said customer chooses the amount of the gift certificate and enters the credit card and billing information to pay for said universal gift certificate;

wherein said Lead Web Site debits said customer's credit card and escrows the money; allowing said customer to send an online universal gift certificate to a recipient; and

wherein said universal gift certificate is redeemable on any of the cooperating merchant sites authorized by said customer.

18. The process of Claim 17, wherein said recipient browses the merchant sites authorized by said customer and selects items to purchase using said Multi-Site Shopping Cart on said Lead Web Site's site.

19. The process of Claim 18 wherein if the amount of the purchase is higher than said universal gift certificate value, then said Lead Web Site ask said recipient for the difference; and wherein if the amount of the purchase is lower than said universal gift certificate value, then the corresponding credit will be available for another purchase.

20. The process of Claim 1, further comprising the step of:

allowing an organizer to browse the merchant sites and choose a gift to be purchased through a pooling of resources;

wherein said gift can be made up of several items, from several merchants, using said Multi-Site Shopping Cart on said Lead Web Site's site;

wherein said organizer can assign purchase contribution participation levels to a set of participants on said Lead Web Site's site; and

wherein an email is sent to said participants and they are prompted to come to said Lead Web Site's site and pay for their contribution by entering their credit card information.

21. The process of Claim 20, wherein once the full amount has been received, said Lead Web Site emails said organizer who then completes the purchase with the available funds.

22. The process of Claim 21, wherein said organizer can specify the purchase contribution amount to be open, thereby allowing each participant to contribute any amount.

23. The process of Claim 22, wherein any person can check to see the total amount paid.

24. The process of Claim 22, wherein said organizer can choose whether the contributions are "blind", so nobody can see the amount of each person's contribution or whether said organizer is the only person allowed to see the contribution amounts.

25. The process of Claim 22, wherein once a certain time period has passed or a set amount has been reached, said Lead Web Site emails said organizer, who then completes the purchase for the selected gift or uses the available funds to purchase another gift in case of under or over-contribution participation.

26. An apparatus for a Multi-Site Shopping Cart that provides portals and

merchants with a Cooperative Sales relationship across a computer network and allows merchants to control the customer's shopping experience in a computer environment, comprising:

a parsing proxy server;

wherein a portal or a merchant may be designated as a Lead Web Site;

wherein said customer begins shopping through said Lead Web Site;

wherein said proxy server receives merchant page requests from said customer, through links placed on said Lead Web Site;

wherein said proxy server forwards said requests to the appropriate merchant;

wherein said proxy server receives the requested page; and

wherein said proxy server redirects the proper Universal Resource Locators (URL) in said requested page to said proxy server before serving said requested page to said customer.

27. The apparatus of Claim 26, wherein said proxy server uses a wrapper specific to said merchant, said wrapper recognizes the URL of the pages served by the merchant and searches for the relevant information in said requested page.

28. The apparatus of Claim 25, wherein said wrapper on said proxy server also receives customer information from an application server and places it in said requested page.

29. The apparatus of Claim 26, wherein said proxy server uses tags that the merchant has inserted into the page's HTML template to recognize the URL of the pages served by the merchant and searches for the relevant information in said requested page.

30. The apparatus of Claim 29, wherein said tags also indicate scripts to be executed by said proxy server.

31. The apparatus of Claim 26, further comprising:

an application server resident on said Lead Web Site;

wherein said proxy server sends the relevant information from said requested page to said application server; and

said application server gathers said relevant information to create and display said Multi-Site Shopping Cart.

32. The apparatus of Claim 31, wherein said proxy server receives customer information from said application server and places said customer information in said requested page at locations in said requested page indicated by tags inserted by the merchant into said requested page's HTML template.

33. The apparatus of Claim 31, wherein said application server allows said customer to click on a single button to purchase the items in said Multi-Site Shopping Cart, said application server instructs a software robot on said proxy server to re-create each shopping cart on each merchant listed in said multi-site shopping cart and then simulate the check-out procedure on said merchant site on said customer's behalf, using said customer's information.

34. The apparatus of Claim 26, wherein said proxy server manages cookies sent by merchant sites.

35. The apparatus of Claim 26, wherein said proxy server records said customer's shopping behavior in a database.

36. The apparatus of Claim 26, further comprising:

a module for allowing said customer to create a wish list on said Lead Web Site's site;

wherein said customer browses said customer's favorite merchant sites, selects items that said customer is interested in, and creates said wish list by placing said items in said Multi-Site Shopping Cart on said Lead Web Site's site; and

wherein said customer can edit said wish list by deleting items or changing their quantities on said Lead Web Site without having to go back to the other merchant sites.

37. The apparatus of Claim 36, wherein said customer's friends view said wish list on said Lead Web Site; and wherein said friends select items that they want to purchase for said customer through said Multi-Site Shopping Cart.

38. The apparatus of Claim 37, wherein said purchase is tracked and the purchased item is automatically taken off said wish list.

39. The apparatus of Claim 26, further comprising:

a module for allowing an author to create a suggestion list for a partnering site;

wherein said author places said suggestion list in a template and posts it on a partnering web site;

wherein a customer visiting said partnering site views said suggestion list and selects the products that said customer is interested in from said suggestion list by clicking on a link, thereby taking said customer to merchant site through said proxy server; and

wherein items selected on merchant site are added to said multi-site shopping cart on said Lead Web Site.

40. The apparatus of Claim 39, wherein said application server on said Lead Web Site stores said customer's credit card and billing and shipping information and allows said customer to purchase the selections in said multi-site shopping cart in one button click.

41. The apparatus of Claim 39, wherein said author of said suggestion list browses merchant sites and select items that said author is interested in to create a suggestion list using said Multi-Site Shopping Cart on said Lead Web Site's site; wherein said author can edit said suggestion list by deleting items or changing their quantities on said Lead Web Site without having to go back to the other merchant sites; and wherein author can post said suggestion list on said Lead Web Site.

42. The apparatus of Claim 26, further comprising:

a module for allowing a customer to purchase an online universal gift certificate on said Lead Web Site's site;

wherein said customer chooses the amount of the gift certificate and enters the credit card and billing information to pay for said universal gift certificate;

wherein said Lead Web Site debits said customer's credit card and escrows the money; allowing said customer to send an online universal gift certificate to a recipient; and

wherein said universal gift certificate is redeemable on any of the cooperating merchant sites authorized by said customer.

43. The apparatus of Claim 42; wherein said recipient browses the merchant sites authorized by said customer and selects items to purchase using said Multi-Site Shopping Cart on said Lead Web Site's site.

44. The apparatus of Claim 43, wherein if the amount of the purchase is higher than said universal gift certificate value, then said Lead Web Site ask said

recipient for the difference; and wherein if the amount of the purchase is lower than said universal gift certificate value, then the corresponding credit will be available for another purchase.

45. The apparatus of Claim 26, further comprising:

a module for allowing an organizer to browse the merchant sites and choose a gift to be purchased through a pooling of resources;

wherein said gift can be made up of several items, from several merchants, using said Multi-Site Shopping Cart on said Lead Web Site's site;

wherein said organizer can assign purchase contribution participation levels to a set of participants on said Lead Web Site's site; and

wherein an email is sent to said participants and they are prompted to come to said Lead Web Site's site and pay for their contribution by entering their credit card information.

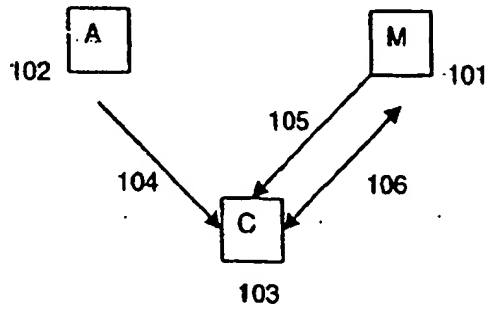
46. The apparatus of Claim 45, wherein once the full amount has been received, said Lead Web Site emails said organizer who then completes the purchase with the available funds.

47. The apparatus of Claim 46, wherein said organizer can specify the purchase contribution amount to be open, thereby allowing each participant to contribute any amount.

48. The apparatus of Claim 47, wherein any person can check to see the total amount paid.

49. The apparatus of Claim 47, wherein said organizer can choose whether the contributions are "blind", so nobody can see the amount of each person's contribution or whether said organizer is the only person allowed to see the contribution amounts.

50. The apparatus of Claim 47, wherein once a certain time period has passed or a set amount has been reached, said Lead Web Site emails said organizer, who then completes the purchase for the selected gift or uses the available funds to purchase another gift in case of under or over-contribution participation.



A – Affiliate Site
M – Merchant Site
C - Customer

Fig. 1
Prior Art

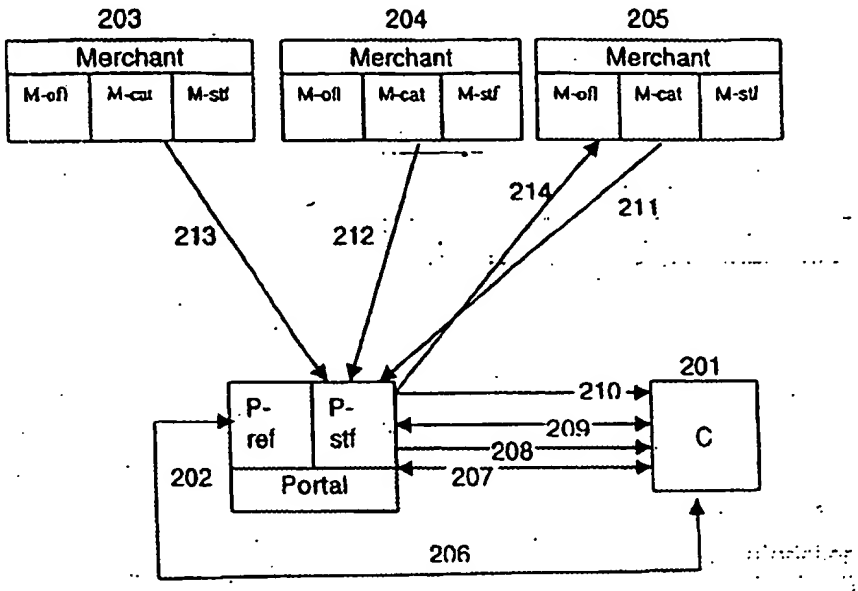


Fig. 2
Prior Art

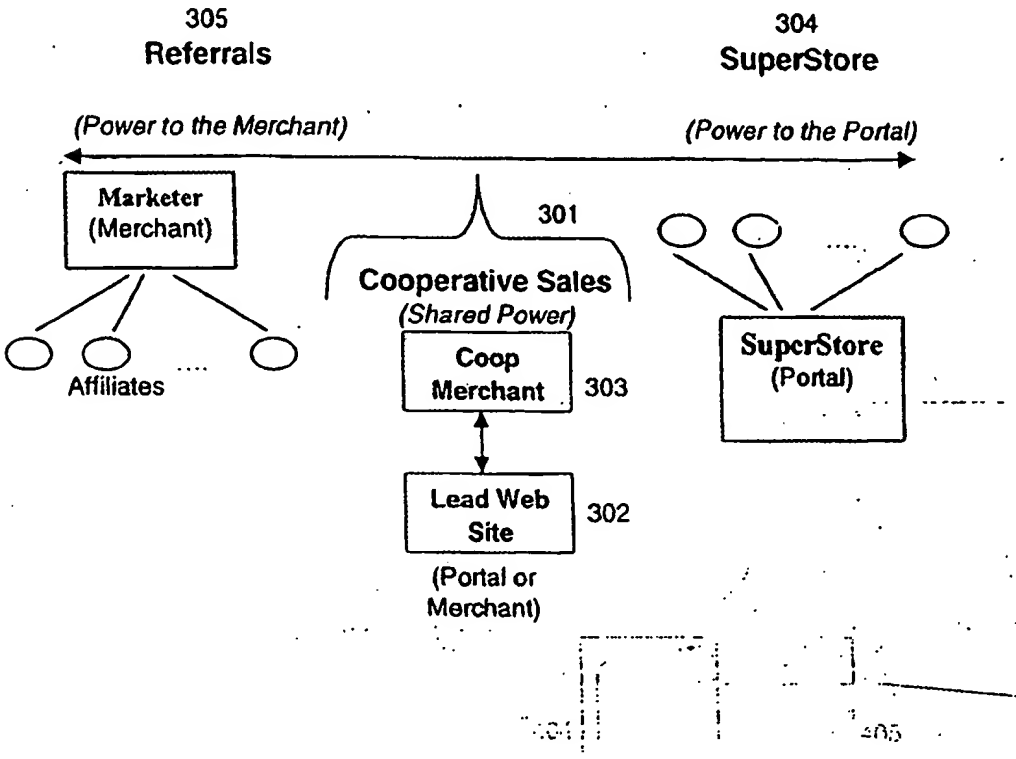
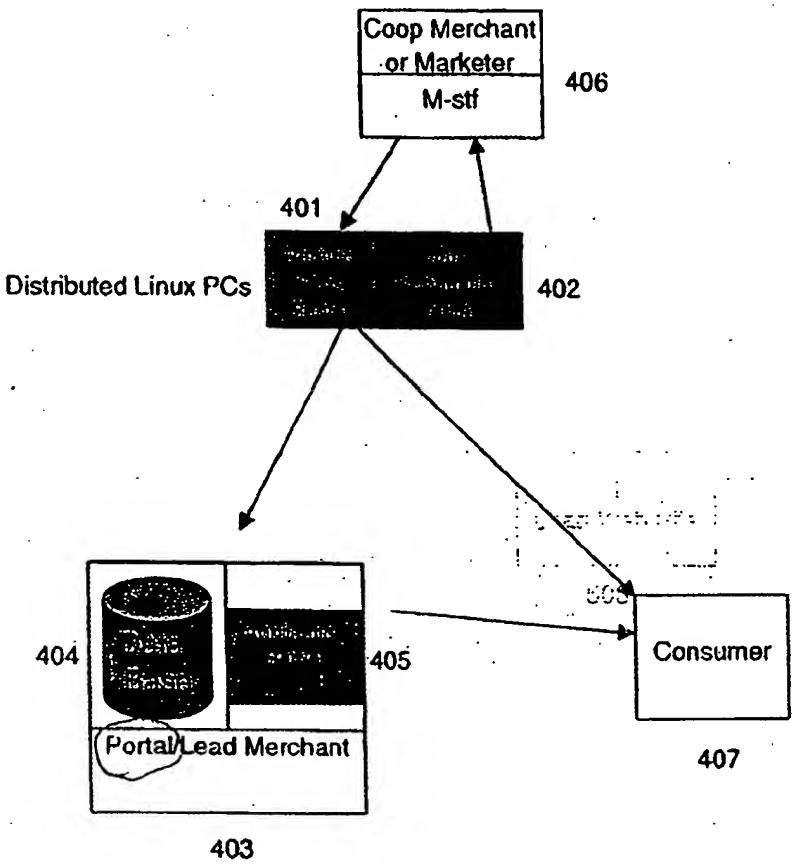

305
Referrals
304
SuperStore
(Power to the Merchant)
(Power to the Portal)
Marketer
(Merchant)
301
Cooperative Sales
(Shared Power)
Coop
Merchant
303
SuperStore
(Portal)
Affiliates
Lead Web
Site
302
(Portal or
Merchant)

Fig. 3


Coop Merchant or Marketer
M-stf
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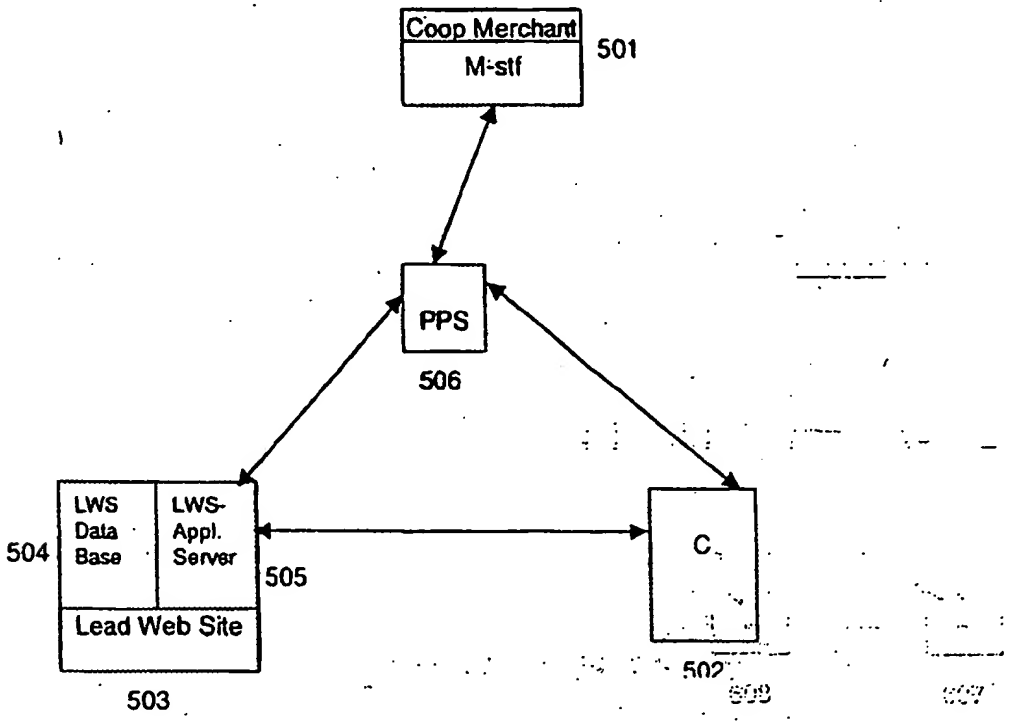
401
Distributed Linux PCs
402
404
405
Portal/Lead Merchant
403
Consumer
407

Fig. 4


Coop Merchant
M-stf
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PPS
506
LWS
Data
Base
LWS-
Appl.
Server
504
505
Lead Web Site
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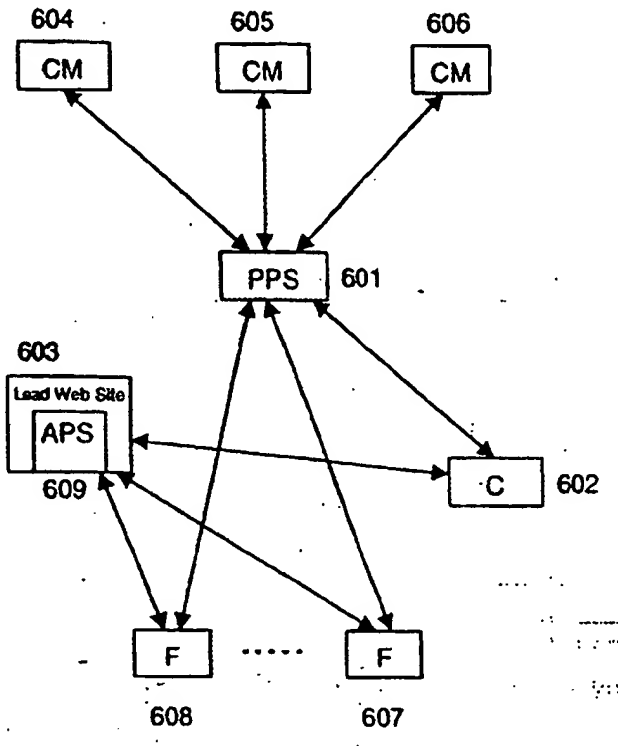
C
502

Fig. 5


604
CM
605
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606
CM
PPS
601
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Lead Web Site
APS
609
C
602
F
F
608
607

Fig. 6

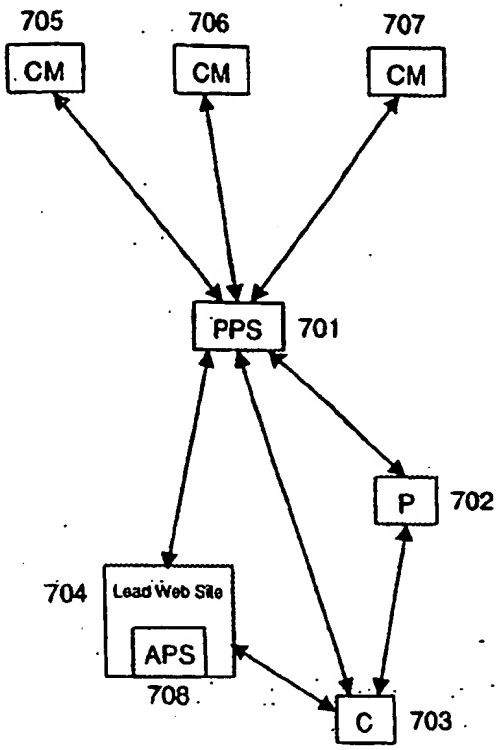

Fig. 7

Fig. 8

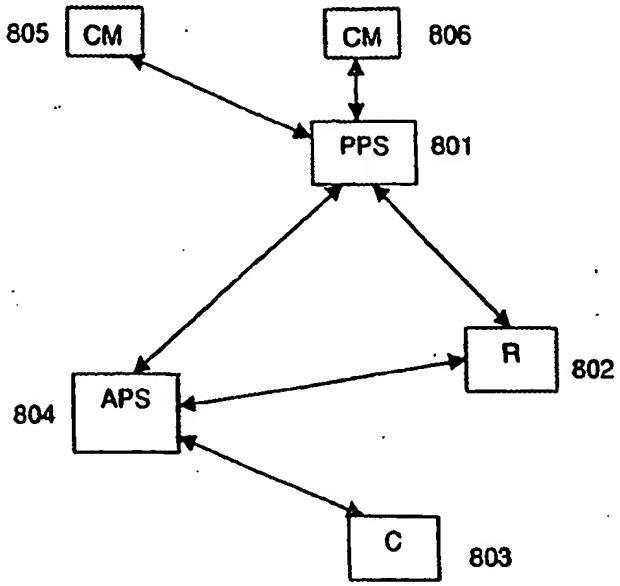

Fig. 8

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